

CLAIMS

1. A structure comprising:

a substrate having a top surface for receiving a die;

a conductor patterned on said top surface of said substrate, a first terminal of said

5 conductor being adapted for connection to a first substrate signal bond pad and a second

terminal of said conductor being adapted for connection to a first die signal bond pad;

a printed circuit board attached to a bottom surface of said substrate;

at least one via in said substrate;

said at least one via providing an electrical connection between a second die signal

10 bond pad and said printed circuit board.

2. The structure of claim 1 wherein said die is a semiconductor die.

3. The structure of claim 1 wherein said substrate comprises an organic
15 material.

4. The structure of claim 1 wherein said substrate comprises a ceramic material.

5. The structure of claim 1 wherein said at least one via provides an electrical
20 connection between a second substrate signal bond pad and said printed circuit board,
wherein said second substrate signal bond pad is electrically connected to said second die
signal bond pad.

6. The structure of claim 5 wherein said second substrate signal bond pad is electrically connected to said second die signal bond pad by a bonding wire.

7. The structure of claim 1 wherein said at least one via provides an electrical
5 connection between said second die signal bond pad and a land, said land being electrically connected to said printed circuit board.

8. The structure of claim 1 wherein said at least one via provides an electrical
connection between a second substrate signal bond pad and a land, wherein said second
10 substrate signal bond pad is electrically connected to said second die signal bond pad, and wherein said land is electrically connected to said printed circuit board.

9. The structure of claim 8 wherein said second substrate signal bond pad is
electrically connected to said second die signal bond pad by a bonding wire.

10. The structure of claim 1 wherein said at least one via comprises a thermally
conductive material.

11. The structure of claim 1 wherein said conductor is an inductor.

12. The structure of claim 11 wherein said first terminal of said inductor is
connected to said first substrate signal bond pad and said second terminal of said inductor
is connected to said first die signal bond pad.

13. A structure comprising:

a substrate having a top surface for receiving a die;

a conductor patterned within said substrate, a first substrate signal bond pad being
a first terminal of said conductor and a second substrate signal bond pad being a second
5 terminal of said conductor;

a printed circuit board attached to a bottom surface of said substrate;

at least one via in said substrate;

said at least one via providing an electrical connection between a die signal bond
pad and said printed circuit board.

14. The structure of claim 13 wherein said die is a semiconductor die.

15. The structure of claim 13 wherein said substrate comprises an organic
material.

16. The structure of claim 13 wherein said substrate comprises a ceramic
material.

17. The structure of claim 13 wherein said at least one via provides an electrical
20 connection between said die signal bond pad and a land, said land being electrically
connected to said printed circuit board.

18. The structure of claim 13 wherein said at least one via comprises a thermally conductive material.

19. The structure of claim 13 wherein said conductor comprises a plurality of
5 via metal segments within said substrate.

20. The structure of claim 19 wherein said conductor is an inductor.

21. A method for fabricating a structure for receiving a semiconductor die, said
10 method comprising steps of:

drilling a first hole in a substrate;

filling said first hole with metal to form a first via;

15 patterning a conductor on a top surface of said substrate, a first terminal of said conductor being adapted for connection to a substrate signal bond pad and a second terminal of said conductor being adapted for connection to a die signal bond pad;

patterning a support pad on said top surface of said substrate, and patterning a heat spreader on a bottom surface of said substrate, said first via providing an electrical connection between said heat spreader and said support pad, said support pad being suitable for receiving said semiconductor die.

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22. The method of claim 21 wherein said substrate comprises an organic material.

23. The method of claim 21 wherein said substrate comprises a ceramic material.

24. The method of claim 21 further comprising a step of attaching said bottom surface of said substrate to a printed circuit board.

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25. The method of claim 24 wherein said first via provides an electrical connection between said die signal bond pad and a land, said land being electrically connected to said printed circuit board.

26. The method of claim 21 wherein said first via comprises a thermally conductive material.

27. The method of claim 21 wherein said conductor is an inductor.

28. A method for fabricating a structure for receiving a semiconductor die, said method comprising steps of:

patterning a conductor within a substrate, a first substrate signal bond pad being a first terminal of said conductor and a second substrate signal bond pad being a second terminal of said conductor;

patterning a support pad on a top surface of said substrate, and patterning a heat spreader on a bottom surface of said substrate, a first via providing an electrical connection between said heat spreader and said support pad, said support pad being suitable for receiving said semiconductor die.

29. The method of claim 28 wherein said substrate comprises an organic material.

5 30. The method of claim 28 wherein said substrate comprises a ceramic material.

31. The method of claim 28 further comprising a step of attaching said bottom surface of said substrate to a printed circuit board.

32. The method of claim 31 wherein said first via provides an electrical connection between a die signal bond pad and a land, said land being electrically connected to said printed circuit board.

33. The method of claim 28 wherein said first via comprises a thermally conductive material.

34. The method of claim 28 wherein said conductor comprises a plurality of via metal segments within said substrate.

20 35. The method of claim 34 wherein said conductor is an inductor.